Particle Scattering

$b_{sca,\ RGB}$

Scattering Uncertainties

$\boldsymbol{\sigma}_{sca,\ meas,\ RGB}$

$\boldsymbol{\sigma}_{sca,\ inst}$

Sect. 2.1.2 & 2.1.3

Particle Size Distribution

PNSD, D_p

Size Distribution Uncertainties

$\boldsymbol{\sigma}_{PNSD,meas}$, $\boldsymbol{\sigma}_{PNSD,\ inst}$, $\boldsymbol{\sigma}_{D}$

Sect. 2.1.1 & 2.1.3

Use Mie scattering look-up table and measured scattering to select solutions below error threshold

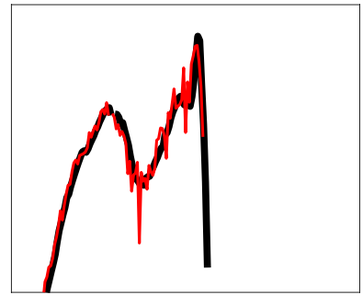
$$\Delta b_{sca,RGB} < \Delta\sigma_{sca,RGB}$$

Sect. 3.1 & 3.2

Select highly probable Mie solutions to reduce sample space

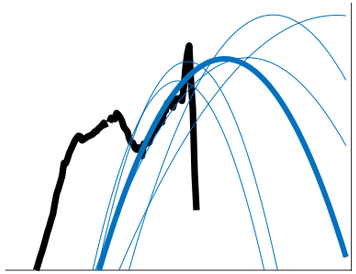
Sect. 3.2

Perturb measured size distribution using variability and uncertainties



Sect. 3.3

Use fitting region in measured size distribution to minimize residual for probable Mie solutions



Sect. 3.4

Retrieve sea spray mode fitting parameters (N_T, D_g, σ_g) by averaging minimum residual fits